RECEIVED
CENTRAL FAX CENTER

JAN 2 2 2007

Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for determining a response to administration of a cancer chemotherapeutic ~~or chemopreventive~~ agent to an individual, comprising:

(a) collecting a first tissue or cell sample from the individual before exposing the individual to the cancer chemotherapeutic ~~or chemopreventive~~ agent;

(b) collecting a second tissue or cell sample from the individual after exposing the individual to the cancer chemotherapeutic ~~or chemopreventive~~ agent;

(c) staining the first and second tissue or cell samples with one or a multiplicity of stains that are either X-Gal, a detectably-labeled antibody directed against a biological marker, or both X-Gal and a detectably-labeled antibody directed against a biological marker, wherein said biological marker is p21, p27, p16, or TGF-β~~, or SA β-Gal~~;

(d) measuring the optical density of the stained cells as in step (c), wherein the stained cells are illuminated with light having a wavelength absorbed by the stain;

(e) determining whether expression of the biological marker was increased following exposure to the cancer chemotherapeutic ~~or chemopreventive~~ agent.

2. (Original) The method of claim 1, wherein the detectable label is a chromagen or a fluoraphore.

3. (Canceled)

4. (Original) The method of claim 1, wherein the amount of biological marker protein is determined by ELISA assay.

5. (Original) The method of claim 1, wherein optical density of the stained cells is performed by image analysis.

6. (Previously Presented) The method of claim 5, wherein image analysis is performed by splitting a signal comprising the optical density of the stained cells into a multiplicity of signals that are processed using optical filters having different absorption and transmittance properties, so that each signal is specific for one of a multiplicity of stains used to stain the cells.